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EXAMINER	
CHEN, PO WEI	

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/964,337	KONDO, HIROKAZU	
	Examiner	Art Unit	
	Po-Wei (Dennis) Chen	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *September 22, 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

In response to an Amendment received on September 22, 2003. This action is final.

Claims 1-9 are pending in this application. Claims 1, 6, 7 and 9 are independent claims.

The present title of the invention is "Color Reproduction Characteristic Display Apparatus, and Color Reproduction Characteristic Display Program Storage".

The Group Art Unit of the Examiner case is now 2676. Please use the proper Art Unit number to help us serve you better.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 8 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitation "device-independent color space" in claim 8-9 is not supported by the Specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6 and 9 rejected under 35 U.S.C. 102(e) as being anticipated by Spaulding et al. (US 6,269,184; refer to as Spaulding herein).

5. Regarding claim 1, Spaulding discloses a method and apparatus for interactive color transformation comprising:

A color reproduction characteristic display apparatus for displaying color reproduction characteristics wherein an association between coordinates of a first color space defining a color on image data and coordinates of a second color space defining a color on an image are defined in accordance with a device for mediating between the image data and the image (see lines 1-5 of abstract, lines 1-8 of column 4 and lines 5-13 of column 5);

A range designation section for designating a desired coordinate range in said first color space in accordance with an operation ("Second, the user is given the choice of manually choosing specific input color values to be mapped to specific output color values", see lines 64-67 of column 4 and lines 5-13 of column 5; also see lines 54-57 of column 5). It is noted that while the claim recites coordinate, it is clear that the values of the color space representing the same (see lines 1-10 of column 4). Thus, limitation of claim is met;

An image display section for displaying a color reproduction image in which there are plotted coordinate points on said second color space associated with coordinates within the coordinate range designated by said range designation section of coordinates of lattice points wherein said first color space is partitioned as a lattice ("In FIG. 5A the lattice indices would be determined by the input control values and the position of the nodes would be determined by the

default mapping...The arrows in FIG. 5B represent the direction and distance that the corresponding color values in the output space have been moved when the user designates the constraints by picking the corresponding color values in the output space", see lines 33-50 of column 7 and Fig. 5A-C).

6. Regarding claim 2, Spaulding discloses a method and apparatus for interactive color transformation comprising:

Image display section optionally displays the color reproduction image on a two-dimensional display basis or a three-dimensional display basis in accordance with an operation (see Fig. 5A-C and Fig. 6A-D).

7. Regarding claim 3, Spaulding discloses a method and apparatus for interactive color transformation comprising:

A display plot designation section for designating a desired point of points plotted on the color reproduction image it accordance with an operation ("For example, the user would select the color point in the input space corresponding to node 70 (FIG. 5A) in step 32 and then select the position of node 72 (FIG. 5B) in step 34 as the corresponding color value in the output space", see lines 45-54 of column 7 and Fig. 5A-C);

Image display section displays the color reproduction image and in addition coordinate values on said first color space and coordinate values on said second color space, which correspond to the point on the color reproduction image designated by said display plot designation section (see lines 33-53 of column 5 and Fig. 3). It is noted that the coordinate or color values can be displayed along with output images. Thus, limitation of claim is met.

8. Regarding claim 4, Spaulding discloses a method and apparatus for interactive color transformation comprising:

A display plot designation section for designating a desired point of points plotted on the color reproduction image in accordance with an operation ("For example, the user would select the color point in the input space corresponding to node 70 (FIG. 5A) in step 32 and then select the position of node 72 (FIG. 5B) in step 34 as the corresponding color value in the output space", see lines 45-54 of column 7 and Fig. 5A-C);

Image display section displays the color reproduction image and in addition information as to a distance in said second color space, between two points on the color reproduction image designated by said display plot designation section ("The arrows in FIG. 5B represent the direction and distance that the corresponding color values in the output space have been moved when the user designates the constraints by picking the corresponding colors in the output space", see lines 45-54 of column 7 and Fig. 5A-C).

9. Regarding claim 6, as statements presented above, with respect to claim 1 are incorporated herein. Also, see lines 49-54 of column 4 and Fig. 4.

10. Regarding claim 9, as statements presented above, with respect to claim 1 are incorporated herein. Also, see lines 51-65 of column 3 and lines 21-30 of column 4 of Spaulding. Color space transformation of input and output data values can be device-independent color space such as a CIELAB color space.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaulding et al. (US 6,269,184; refer to as Spaulding herein) as applied to claim 1 above, and further in view of Semba et al. (US 6,411,304; refer to as Semba herein).

13. Regarding claim 5, it is noted that Spaulding does not disclose an image display section has a mode wherein a plurality of color reproduction images associated with a plurality of output devices is displayed on a superposing basis. However, this is known in the art taught by Semba. Semba teaches a color data gamut conversion which shows color reproduction images in color space for different output devices (i.e. monitor and printer) (see Fig. 1). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Semba to provide an efficient performance for data conversion. Also, both systems are for providing color space conversion. Thus, limitation of claim is met.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaulding et al. (US 6,269,184; refer to as Spaulding herein) as applied to claim 1 above, and further in view of Poe et al. (US 5,857,063; refer to as Poe herein).

15. Regarding claim 8, Spaulding discloses a method and apparatus for interactive color transformation comprising:

Relates a color conversion for the image data to a device-independent color space as a first transformation; Relates a color conversion for the image data to the device-independent color space as a second transform (lines 51-65 of column 3 and lines 21-30 of column 4; color space transformation can be a device-independent color space such as a CIELAB color space).

Spaulding does not disclose inter-relates the first transform and an inverse of the second transform. Poe discloses a multicolorant process control utilizing the method (lines 20-24 of abstract). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Poe to provide accurate reproduction of color (lines 11-13 of column 6, Poe). Also, both Spaulding and Poe are directed to method of transforming color spaces.

16. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaulding et al. (US 6,269,184; refer to as Spaulding herein) and further in view of Semba et al. (US 6,411,304; refer to as Semba herein).

17. Regarding claim 7, Spaulding discloses a method and apparatus for interactive color transformation comprising:

A method of displaying color profile (lines 41-44 of column 7 and Fig. 5A-C; while claim recites color profile, the term is broad enough to include the color values being displayed);

A first data file representative of a color profile for a first printing device is developed; a second data file representative of a color profile for a second printing device is developed (lines 18-30 and lines 55-60 of column 4 and Fig. 1, 2 and 5A-C; while claim recites data file, the term is broad enough to include the data values of input or output which are being displayed on the user interface as color profile. Also, it is noted that the input (first) and output (second) color values each can represented for different printers);

Spaulding dose not disclose the first data file is displayed on a display superposed with the second data file thus allowing detailed examination of the color profiles. Semba disclose a method of color data conversion utilizing the method (lines 3-17 of column 7 and lines 4-10 of column 21 and Fig. 1; the color data of plurality of devices are displayed on a superposed basis).

Response to Arguments

18. Applicant's arguments filed September 22, 2003 have been fully considered but they are not persuasive.

The Applicant argues: reference Spaulding does not disclose plotted coordinate points on a second color space associated with coordinates within the coordinate range designated by a range designation section of coordinates of lattice points wherein the first color space is partitioned as a lattice. However, this is known in the art taught by Spaulding (lines 33-50 of column 7 and Fig. 5A-C; it is noted that the output image (second color space such as CMY) is being produced by manipulating (plotted) the lattice points where the coordinate points is also corresponding to the first space of the input image (RGB), also see lines 21-30 of column 4). Also, the Applicant argues: reference Spaulding does not disclose displaying color reproduction characteristics or represent plotted coordinates points on a device-independent color space. However, while claim recites color reproduction characteristics, the term is broad enough to include the color values being represented on the coordinates of lattice points being displayed during the process of color transformation from one space to another color space, or being reproduced (lines 1-5 of abstract and lines 33-50 of column 7 and Fig. 5A-C, Spaulding). And the claim does not specify the limitation of device-independent color space.

The Applicant argues: reference Spaulding does not disclose displaying a color reproduction image of coordinate points plotted on a second color space. However, this is known in the art taught by Spaulding (lines 33-50 of column 7 and Fig. 5A-C; it is noted that the user can manipulate (plotted) the lattice points to transform input image in first space to output image (reproduced) in second space where the lattice points correspond to color values in the

output space (second color space)). Also, the Applicant argues reference Spaulding does not disclose a display unit. However, Spaulding discloses that the user will be able to interactively process the transformation on a user interface which is illustrated in Fig. 5A-C, also see lines 36-42 of column 4 and lines 50-54 of column 7 and Fig. 2.

The Applicant argues: reference Spaulding does not disclose color spaces in either a two-dimensional or three-dimensional basis. However, this is known in the art taught by Spaulding (Fig. 5A-C and Fig. 6A-C; also see lines 5-8 of column 4).

The Applicant argues: reference Spaulding does not disclose display color reproduction characteristic or correspond to coordinate points in which a desired range of a device-dependent color space is partitioned as a lattice. The claim does not disclose this specific limitation.

The Applicant argues: reference Spaulding does not disclose color reproduction characteristic display (lines 1-5 of abstract and lines 33-50 of column 7 and Fig. 5A-C, Spaulding; color values correspond to characteristic; also see lines 36-42 of column 4 and lines 50-54 of column 7 and Fig. 2).

The Applicant argues: Semba does not disclose display color reproduction characteristics or correspond to coordinate points in which a desired range of a device-dependent color space is partitioned as a lattice. However, the claim does not specify the limitation. And Semba does show plurality of output devices are displayed on a superposed basis (see Fig. 1; also see lines 3-17 of column 7).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kumada et al. (US 6,459,436) disclose "Image Processing Method and Apparatus".

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Po-Wei (Dennis) Chen whose telephone number is (703) 305-8365. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C Bella can be reached on (703) 308-6829. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Po-Wei (Dennis) Chen
Examiner

Art Unit 2676

Po-Wei (Dennis) Chen
December 11, 2003

Matthew C. Bella

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
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